



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0379; Project Identifier MCAI-2021-00068-R; Amendment 39-21667; AD 2021-16-05]

RIN 2120-AA64

Airworthiness Directives; Airbus Helicopters

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: The FAA is superseding Airworthiness Directive (AD) 2016-12-51, which applied to all Airbus Helicopters Model AS332L2 and Model EC225LP helicopters.

AD 2016-12-51 prohibited all further flight of Model AS332L2 and Model EC225LP helicopters. This AD requires replacing certain second stage planet gear assemblies, removing certain epicyclic modules, installing a full flow magnetic plug (FFMP), revising the existing rotorcraft flight manual (RFM) for your helicopter, repetitively inspecting the main gearbox (MGB) particle detectors, repetitively inspecting the MGB oil filter and oil cooler, and corrective action if necessary, as specified in a European Union Aviation Safety Agency (EASA) AD, which is incorporated by reference. The actions specified in this AD terminate the flight prohibition. The FAA is issuing this AD to address the unsafe condition on these products.

DATES: This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: For EASA material incorporated by reference (IBR) in this AD, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu; Internet www.easa.europa.eu. You may find this material on the EASA website at <https://ad.easa.europa.eu>. For Airbus Helicopters service information, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>. You may view this material at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. It is also available in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0379.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0379; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this final rule, any comments received, and other information. The address for Docket Operations is U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

FOR FURTHER INFORMATION CONTACT: Mahmood Shah, Aviation Safety Engineer, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5538; email mahmood.g.shah@faa.gov.

SUPPLEMENTARY INFORMATION:

Background

EASA, which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2017-0134R2, dated April 16, 2020 (EASA AD 2017-0134R2) (also referred to as the Mandatory Continuing Airworthiness Information, or the MCAI), to correct an unsafe condition for all Airbus Helicopters Model AS332L2 and EC225LP helicopters.

The FAA issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2016-12-51, Amendment 39-18578 (81 FR 43479, July 5, 2016) (AD 2016-12-51). AD 2016-12-51 applied to all Airbus Helicopters Model AS332L2 and EC225LP helicopters. The NPRM published in the *Federal Register* on June 1, 2021 (86 FR 29212). The NPRM was prompted by an accident involving an Airbus Helicopters Model EC225LP helicopter in which the main rotor hub detached from the MGB. The Airbus Helicopters Model AS332L2 helicopter has a similar design to the affected Model EC225LP helicopter, therefore, this model may be subject to the unsafe condition revealed on the Model EC225LP helicopter. The NPRM proposed to require replacing certain second stage planet gear assemblies, removing certain epicyclic modules, installing an FFMP, revising the existing RFM for your helicopter, repetitively inspecting the MGB particle detectors, repetitively inspecting the MGB oil filter and oil cooler, and corrective action if necessary, as specified in EASA AD 2017-0134R2. The NPRM also proposed to provide terminating action for certain repetitive inspections.

The FAA is issuing this AD to address failure of the main rotor system, which would result in loss of control of the helicopter. See the MCAI for additional background information.

Discussion of Final Airworthiness Directive

Comments

The FAA gave the public the opportunity to participate in developing this final rule. The FAA received no comments on the NPRM or on the determination of the cost to the public.

Conclusion

The FAA reviewed the relevant data and determined that air safety and the public interest require adopting this final rule as proposed, except for minor editorial changes.

The FAA has determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM for addressing the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

Related Service Information Under 1 CFR Part 51

EASA AD 2017-0134R2 references procedures for replacing certain second stage planet gear assemblies with serviceable parts; removing certain epicyclic modules from service; modifying the helicopter by installing an FFMP; revising the RFM to prohibit MGB particle burning in-flight; repetitively inspecting the FFMP and MGB particle detectors for metal particles, analyzing any metal particles that are found, and corrective action; and repetitively inspecting the MGB oil filter and oil cooler for particles and corrective action. The corrective actions include replacing an affected MGB with a serviceable MGB. EASA AD 2017-0134R2 also provides terminating action for certain repetitive inspections.

Airbus Helicopters has issued Emergency Alert Service Bulletin 05A049, Revision 6, dated July 25, 2017, for Model EC225 helicopters; and Emergency Alert Service Bulletin 05.01.07, Revision 6, dated July 27, 2017, for Model AS332 helicopters. The service information specifies procedures for, among other things, replacing the MGB.

This material is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

Differences Between this AD and the MCAI

Although the service information referenced in EASA AD 2017-0134R2 specifies to return affected planetary gear assemblies to the manufacturer for module overhaul, this AD does not include that requirement.

Although the service information referenced in EASA AD 2017-0134R2 specifies that retrofit of the planet gear of the MGB can only be done by Airbus Helicopters or Airbus Helicopters approved repair centers, this AD does not include that requirement.

EASA AD 2017-0134R2 requires operators to “inform all flight crews” of revisions to the RFM, and thereafter to “operate the helicopter accordingly.” However, this AD does not specifically require those actions. FAA regulations mandate compliance with only the operating limitations section of the flight manual. The flight manual changes required by this AD apply to the emergency procedures section of the existing RFM for your helicopter. Furthermore, compliance with such requirements in an AD is impracticable to demonstrate or track on an ongoing basis; therefore, a requirement to operate the aircraft in such a manner is unenforceable. Nonetheless, the FAA recommends that flight crews of the helicopters listed in the applicability operate in accordance with the revised emergency procedures mandated by this AD.

Interim Action

The FAA considers this AD interim action. If final action is later identified, the FAA might consider further rulemaking then.

Costs of Compliance

The FAA estimates that this AD affects 28 helicopters of U.S. registry. The FAA estimates the following costs to comply with this AD:

Estimated costs for required actions*

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
New actions	Up to 6 work-hours X \$85 per hour = \$510	\$0	Up to \$510	Up to \$14,280

*Table does not include estimated costs for reporting.

The FAA estimates that it will take about 1 work-hour per product to comply with the reporting requirement in this AD. The average labor rate is \$85 per hour. Based on these figures, the FAA estimates the cost of reporting the inspection results on U.S. operators to be \$2,380, or \$85 per product.

The FAA estimates the following costs to do any necessary on-condition actions that will be required based on the results of any required actions. The FAA has no way of determining the number of helicopters that might need these on-condition actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
40 work-hours X \$85 per hour = \$3,400	\$295,000	\$298,400

According to the manufacturer, some or all of the costs of this AD may be covered under warranty, thereby reducing the cost impact on affected operators. The FAA does not control warranty coverage for affected operators. As a result, the FAA has included all known costs in the cost estimate.

Paperwork Reduction Act

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB control number. The control number for the collection of information required by this AD is 2120-0056. The

paperwork cost associated with this AD has been detailed in the Costs of Compliance section of this document and includes time for reviewing instructions, as well as completing and reviewing the collection of information. Therefore, all reporting associated with this AD is mandatory. Comments concerning the accuracy of this burden and suggestions for reducing the burden should be directed to Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Pkwy., Fort Worth, TX 76177-1524.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a "significant regulatory action" under Executive Order 12866,

(2) Will not affect intrastate aviation in Alaska, and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2016-12-51, Amendment 39-18578 (81 FR 43479, July 5, 2016); and

b. Adding the following new airworthiness directive:

2021-16-05 Airbus Helicopters: Amendment 39-21667; Docket No. FAA-2021-0379; Project Identifier MCAI-2021-00068-R.

(a) Effective Date

This airworthiness directive (AD) is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2016-12-51, Amendment 39-18578 (81 FR 43479, July 5, 2016) (AD 2016-12-51).

(c) Applicability

This AD applies to all Airbus Helicopters Model AS332L2 and EC225LP helicopters, certificated in any category.

(d) Subject

Joint Aircraft System Component (JASC) Code 6320, Main Rotor Gearbox.

(e) Reason

This AD was prompted by an accident involving a Model EC225LP helicopter in which the main rotor hub detached from the main gearbox. The FAA is issuing this AD to address failure of the main rotor system, which would result in loss of control of the helicopter.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Requirements

Except as specified in paragraph (h) of this AD: Comply with all required actions and compliance times specified in, and in accordance with, European Union Aviation Safety Agency (EASA) AD 2017-0134R2, dated April 16, 2020 (EASA AD 2017-0134R2).

(h) Exceptions to EASA AD 2017-0134R2

(1) Where EASA AD 2017-0134R2 refers to the effective dates specified in paragraphs (h)(1)(i) through (v) of this AD, this AD requires using the effective date of this AD.

(i) The effective date of EASA AD 2017-0134R2.

(ii) October 13, 2016 (the effective date of EASA AD 2016-0199, dated October 7, 2016).

(iii) March 20, 2017 (the effective date of EASA AD 2017-0050-E, dated March 17, 2017).

(iv) June 30, 2017 (the effective date of EASA AD 2017-0111, dated June 23, 2017).

(v) August 1, 2017 (the effective date of EASA AD 2017-0134, dated July 27, 2017).

(2) The “Remarks” section of EASA AD 2017-0134R2 does not apply to this AD.

(3) Where any service information referred to in EASA AD 2017-0134R2 specifies to discard certain parts after they have been removed from the helicopter, this AD requires removing those parts from service.

(4) Where paragraph (2) of EASA AD 2017-0134R2 specifies to replace a part before exceeding the applicable “new service life limit,” this AD requires removing that part from service.

(5) Where any service information referred to in EASA AD 2017-0134R2 specifies to return certain parts to the manufacturer, including for overhaul, after they have been removed from the helicopter, this AD does not include that requirement.

(6) Where EASA AD 2017-0134R2 refers to flight hours (FH), this AD requires using hours time-in-service.

(7) Where any service information referred to in EASA AD 2017-0134R2 specifies to perform a metallurgical analysis and contact the manufacturer if unsure about the characterization of the particles collected, this AD does require characterization of the particles collected, however this AD does not require contacting the manufacturer to determine the characterization of the particles collected.

(8) Where EASA AD 2017-0134R2 requires actions during each “after last flight” of the day (ALF) inspection, this AD requires those actions before the first flight of each day.

(9) Where any service information referred to in EASA AD 2017-0134R2 specifies to do the actions identified in paragraphs (h)(9)(i) through (iv) of this AD, this AD does not include those requirements.

(i) Watch a video for removing the grease from the full flow magnetic plug (FFMP), using a cleaning agent, and collecting particles.

(ii) Return affected planetary gear assembly to the manufacturer for module overhaul.

(iii) Contact the approved repair station/Airbus Helicopters if the reason for a repair to an epicyclic module is unknown and inform/contact Airbus Helicopters.

(iv) Contact the approved repair station/Airbus Helicopters depending on who performed the last overhaul (RG) to determine if a repair has been done on the second stage planet gears since new.

(10) Where any service information referred to in EASA AD 2017-0134R2 specifies that retrofit of the planet gear of the main gearbox (MGB) can only be done by Airbus Helicopters or Airbus Helicopters approved repair centers, this AD does not require that the retrofit of the planet gear be done only by Airbus Helicopters or Airbus Helicopters approved repair centers. For this AD the retrofit can also be done by an FAA-approved repair station.

(11) Where paragraph (5) of EASA AD 2017-0134R2 specifies accomplishing the FFMP additional work within 3 months after August 1, 2017, this AD requires accomplishing the FFMP additional work within 4 months after the effective date of this AD.

(12) Where paragraph (6) of EASA AD 2017-0134R2 specifies to “inform all flight crews and, thereafter, operate the helicopter accordingly,” this AD does not require those actions.

(13) Where any service information referred to in EASA AD 2017-0134R2 specifies that if any 16NCD13 particles are found you are to take a 1-liter sample of oil and send it to the manufacturer, this AD does not require those actions.

(14) Where any service information referred to in EASA AD 2017-0134R2 specifies “Do not resume flights until corrective action(s) are agreed by Airbus Helicopters,” or to contact Airbus Helicopters before resuming flights “if further particles are collected during the close monitoring period” for this AD, you must repair before further flight using a method specified in paragraph (h)(14)(i) or (ii) of this AD.

(i) In accordance with FAA approved procedures.

(ii) The procedures specified in Appendix 4.A., Particle Analysis, of Airbus Helicopters Emergency Alert Service Bulletin 05A049, Revision 6, dated July 25, 2017; or Emergency Alert Service Bulletin 05.01.07, Revision 6, dated July 27, 2017, as applicable, except as required by paragraphs (h)(5), (7), and (13) of this AD.

(15) Where the service information identified in EASA AD 2017-0134R2 specifies to report inspection results to Airbus Helicopters, for this AD, report the inspection results at the applicable time specified in paragraph (h)(15)(i) or (ii) of this AD.

(i) If the inspection was done on or after the effective date of this AD: Submit the report within 30 days after the date of the inspection.

(ii) If the inspection was done before the effective date of this AD: Submit the report within 30 days after the effective date of this AD.

(i) Credit for Previous Actions

(1) This paragraph provides credit for the actions specified in paragraph (4) of EASA AD 2017-0134R2, if those actions were performed before the effective date of this AD using Airbus Helicopters Emergency Alert Service Bulletin 63.00.83 or 63A030, both Revision 1, both dated October 7, 2016.

(2) Corrective action(s) for the inspections required by paragraphs (8) and (10) of EASA AD 2017-0134R2 accomplished on a helicopter before the effective date of this AD, in accordance with Paragraph 3.B. and Appendix 4.A. of the Accomplishment

Instructions of the applicable Airbus Helicopters service information specified in paragraphs (i)(2)(i) through (viii) of this AD, as applicable, are acceptable to comply with the requirements of paragraph (11) of EASA AD 2017-0134R2 for that helicopter, but only for the corrective actions for the inspections required by paragraphs (8) and (10) of EASA AD 2017-0134R2.

(i) Emergency Alert Service Bulletin 05.01.07, Revision 2, dated October 7, 2016.

(ii) Emergency Alert Service Bulletin 05.01.07, Revision 3, dated February 25, 2017.

(iii) Emergency Alert Service Bulletin 05.01.07, Revision 4, dated March 17, 2017.

(iv) Emergency Alert Service Bulletin 05.01.07, Revision 5, dated June 23, 2017.

(v) Emergency Alert Service Bulletin 05A049, Revision 2, dated October 7, 2016.

(vi) Emergency Alert Service Bulletin 05A049, Revision 3, dated February 25, 2017.

(vii) Emergency Alert Service Bulletin 05A049, Revision 4, dated March 17, 2017.

(viii) Emergency Alert Service Bulletin 05A049, Revision 5, dated June 23, 2017.

(j) Special Flight Permit

Special flight permits, as described in 14 CFR 21.197 and 21.199, are prohibited.

(k) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the International Validation Branch, send it to the attention of the person

identified in paragraph (l)(1) of this AD. Information may be emailed to: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(l) Related Information

(1) For more information about this AD, contact Mahmood Shah, Aviation Safety Engineer, Fort Worth ACO Branch, FAA, 10101 Hillwood Pkwy., Fort Worth, TX 76177; telephone 817-222-5538; email mahmood.g.shah@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (m)(4) and (5) of this AD.

(m) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless this AD specifies otherwise.

(i) European Union Aviation Safety Agency (EASA) AD 2017-0134R2, dated April 16, 2020.

(ii) Airbus Helicopters Emergency Alert Service Bulletin 05A049, Revision 6, dated July 25, 2017.

(iii) Airbus Helicopters Emergency Alert Service Bulletin 05.01.07, Revision 6, dated July 27, 2017.

(3) For EASA AD 2017-0134R2, contact the EASA, Konrad-Adenauer-Ufer 3, 50668 Cologne, Germany; telephone +49 221 8999 000; email ADs@easa.europa.eu;

Internet www.easa.europa.eu. You may find this EASA AD on the EASA website at <https://ad.easa.europa.eu>.

(4) For Airbus Helicopters service information, contact Airbus Helicopters, 2701 North Forum Drive, Grand Prairie, TX 75052; telephone (972) 641-0000 or (800) 232-0323; fax (972) 641-3775; or at <https://www.airbus.com/helicopters/services/technical-support.html>.

(5) You may view this service information at the FAA, Office of the Regional Counsel, Southwest Region, 10101 Hillwood Pkwy., Room 6N-321, Fort Worth, TX 76177. For information on the availability of this material at the FAA, call 817-222-5110. This material may be found in the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0379.

(6) You may view this material that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, email fr.inspection@nara.gov, or go to: <https://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued on July 22, 2021.

Gaetano A. Sciortino, Deputy Director for Strategic Initiatives,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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